Appln. No.: 10/585,808

Amendment Dated January 27, 2010 Reply to Office Action of July 22, 2009

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A polymer consisting of linked units, wherein each of at least 80% of the linked units consists of one ion-conducting region and one spacer region connected thereto, wherein

- a) the ion-conducting region consists of one or more aromatic groups,—optionally connected by electron—donating groups, each of the one or more aromatic groups being adjacent to at least one electron—donating group and each of the one or more aromatic groups having attached thereto at least one pendant ion—conducting functional group, wherein if the ion-conducting region includes two or more aromatic groups, then at least two of the aromatic groups are optionally connected by electron—donating groups; and
- b) the spacer region consists of at least four aromatic groups, optionally connected by electron withdrawing groups, each of the at least four aromatic groups being adjacent to at least one electron-withdrawing group and none of the at least four aromatic groupsthem having attached thereto an ion-conducting functional group, wherein at least two of the at least four aromatic groups are optionally connected by electron-withdrawing groups.
- 2. (Previously Presented) A polymer according to claim 1, wherein at least 95% of the linked units consist of the ion-conducting region and the spacer region.
- 3. (Previously Presented) A polymer according to claim 1, wherein the one or more aromatic groups in the ion-conducting region is/are selected from the group consisting of phenylene, napthylene and anthracenylene groups.
- 4. (Previously Presented) A polymer according to claim 1, wherein each aromatic group in the ion-conducting region is adjacent to an electron-donating group.
- 5. (Original) A polymer according to claim 4, wherein the electron-donating group is an ether group.

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- 6. (Previously Presented) A polymer according to claim 1, wherein the at least one pendant ion-conducting functional group attached to each of the one or more aromatic groups in the ion-conducting region is a sulphonic acid group.
- 7. (Previously Presented) A polymer according to claim 1, wherein the ratio of the number of aromatic groups in the spacer region to the number of aromatic groups in the ion-conducting region is at least 2:1.
- 8. (Previously Presented) A polymer according to claim 1, wherein the at least four aromatic groups in the spacer region are selected from the group consisting of phenylene, napthylene and anthracenylene groups.
- 9. (Previously Presented) A polymer according to claim 1, wherein the at least four aromatic groups in the spacer region are connected by electron withdrawing groups.
- 10. (Original) A polymer according to claim 9, wherein the electron-withdrawing groups are sulphone or ketone groups.
- 11. (Previously Presented) A polymer according to claim 1, which has an equivalent weight of less than 800gmol⁻¹.
- 12. (Previously Presented) A polymer according to claim 1, which has an inherent viscosity of greater than 1.0dl/g.
- 13. (Previously Presented) A polymer solution comprising a polymer according to claim 1.
- 14. (Previously Presented) A polymer electrolyte membrane comprising a polymer according to claim 1.
- 15. (Previously Presented) An electrocatalyst layer on a substrate wherein the electrocatalyst layer comprises a polymer according to claim 1.
- 16. (Previously Presented) A membrane electrode assembly comprising one or both of a polymer electrolyte membrane and an electrocatalyst layer on a substrate, wherein the polymer electrolyte membrane and the electrocatalyst layer comprise a polymer according to claim 1.

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17. (Currently Amended) A polymer wherein at least 80% of the repeat units are of the structure:

$$^{\star} \overline{\left(-(d)_{n} - A - - - (d)_{n} - B - \right] - ^{\star}}$$

wherein:

each d is independently an electron-donating group;

each n is independently 0 or 1;

each A is independently <u>an ion-conducting region consisting of one</u> or more aromatic groups optionally connected by electron-donating groups, each of the one or more aromatic groups having attached thereto a pendant ion-conducting functional group and each <u>of the one</u> or more aromatic groups being adjacent to at least one electron-donating group, <u>wherein if the ion-conducting region includes two or more aromatic groups</u>, then at least two of the one or more <u>aromatic groups</u> are optionally connected by electron-donating groups; and

each B is independently a spacer region consisting of at least four aromatic groups optionally connected by electron withdrawing groups, each of the at least four aromatic groups being adjacent to at least one electron-withdrawing group, and none of the at least four aromatic groups having attached thereto a pendant ion-conducting functional group, wherein at least two of the at least four aromatic groups are optionally connected by electron-withdrawing groups.